

Jamaica in 1908, to make investigations into the causes of the prevalence of sarcoptic mange among cattle; and secondly, to Malta in 1910, to study the bionomics of sandflies. In 1911 he worked on the Royal Society's Sleeping Sickness Commission in Nyasaland, where he spent five months in the bush investigating the breeding-places and habits of the tsetse fly; and during 1913-14 he was a member of the inter-departmental committee on the same disease. During the First World War he was engaged by the War Office to take charge of the Entomological Commission appointed to investigate methods for the control of fly-borne diseases occurring in the camps of France and Flanders, and directed the Liverpool centre of investigation set up by the Royal Society Grain (Pests) War Commission, 1916-20, to deal with the damage caused to grain by insects and mites during transit and in store. He was elected a fellow of the Royal Society in 1912.

Entomology, however, was not the only subject upon which Prof. Newstead was an authority. His appointment as curator to the Chester Museum marked the beginning of his interest in the study of the Roman occupation of Chester. So early as 1899 he was writing on Roman remains which had recently come to light in Chester and Penmaenmawr. In 1914 he began active digging, and from that time

onwards, until a few months before his death, he took a large part in excavating, preserving and describing Chester's Roman antiquities. These discoveries and the resultant additions to our knowledge of the Roman occupation were fittingly recognized by the citizens of Chester in 1936, when they conferred upon him the honorary freedom of the city.

During his life-time, Newstead published more than two hundred papers and, since he was an artist of considerable ability, many of them were illustrated by his own hand. As might be expected from such a long, diligent and far-seeking career, these papers covered a wide range of entomological and archæological subjects; but essentially Newstead was a biologist of the old school, a trained observer of Nature, and one who was at his best and happiest in the open air.

WE regret to announce the following deaths:

Sir Joseph Barcroft, C.B.E., F.R.S., emeritus professor of physiology in the University of Cambridge, on March 21, aged seventy-four.

Prof. Pierre Janet, well known for his work on psycho-pathology, on February 24, aged eighty-seven.

NEW FELLOWS OF THE ROYAL SOCIETY

AT the meeting of the Royal Society on March 20, the following were elected fellows:

Dr. W. J. Arkell, formerly senior research fellow of New College, Oxford, distinguished for his researches on the stratigraphy and palæontology of the Jurassic system; he is the author of valuable palæontological monographs on the Lamellibranchs and Ammonites of the British Corallian.

Dr. G. M. Bennett, Government Chemist, distinguished for his work in organic chemistry on the reactivity and configuration of organic molecules.

W. S. Bisat, civil engineer, Collingham, near Leeds, distinguished for his studies in Carboniferous stratigraphy and palæontology; his methods have been successfully applied in Europe and North America.

Mary Lucy Cartwright, fellow of Girton College and lecturer in mathematics in the University of Cambridge; distinguished for her researches in the theory of functions of a complex variable.

Prof. E. J. Conway, professor of biochemistry, University College, Dublin, distinguished for his work on chemical and physico-chemical processes in living tissues.

Prof. T. G. Cowling, professor of mathematics in the University College of North Wales, Bangor, distinguished for his mathematical contributions to astronomy, the theory of gases, the physics of the ionosphere, and geomagnetism.

J. Craigie, member of the scientific staff of the Imperial Cancer Research Fund, London, distinguished for his work in bacteriology and immunology, and especially for his studies of viruses.

M. B. Crane, head of the Pomology Department of the John Innes Horticultural Institution, London,

a notable breeder of new varieties of horticultural plants, whose researches have elucidated the genetical constitution and origin of cultivated English fruit trees and unravelled many problems relating to pollination and the setting of fruit.

Prof. W. J. Duncan, professor of aerodynamics at the College of Aeronautics, Cranfield, distinguished for his contributions to an understanding of flutter in aircraft, and of related problems of elasticity and vibrations.

Prof. M. G. Evans, professor of physical chemistry and head of the Department of Chemistry, University of Leeds, distinguished for his contribution to chemical kinetics and especially for his theoretical work on the modern concepts of reaction velocities.

Dr. W. S. Feldberg, lecturer in physiology, University of Cambridge, distinguished for researches on the mechanism of the humoral transmission of excitation, particularly in relation to the phenomena in which acetylcholine is concerned.

T. Goodey, principal research officer, Institute of Agricultural Parasitology, St. Albans, distinguished for his work on the structure, life-histories and economic importance of nematode worms, particularly those parasitic on plants.

Dorothy Crowfoot Hodgkin, fellow and tutor of Somerville College, Oxford, and University demonstrator in chemical crystallography, distinguished for a long series of investigations by X-ray crystal analysis into the structure of the sterols, proteins and other complex organic molecules.

J. Hutchinson, keeper of the museums, Royal Botanic Gardens, Kew, distinguished for his researches on the taxonomy and affinities of flowering plants and his contributions to the study of the flora of Africa.